State of California **Department of Education**

Supplemental Memorandum

To: **STATE BOARD MEMBERS** **Date: February 25, 2003**

From: **Geno Flores, Deputy Superintendent, Assessment and Accountability Branch**

Re: **ITEM #10**

Subject: **GOLDEN STATE EXAMINATION (GSE) PROGRAM: UPDATE ON THE GSE PROGRAM.**

Please insert the following attachments:

Attachment 1: GSE English – Language Arts Blueprint (Page 1-1)
Attachment 2: Grade 11 English Language Arts California Standards Test Blueprint (Pages 1-5)
Attachment 3: High School Mathematics (Summative) California Standards Test (Pages 1-2)
Attachment 4: High School Mathematics GSE Component (Page 1-1)

In considering the proposed California mid-year budget reductions and the 2003-2004 proposed state budget, the California Department of Education (CDE) anticipates that the only GSE tests that will be administered in spring 2003 are Reading-Writing and High School Mathematics. These tests are the linked tests for the purpose of producing GSE scores that can be used for placement by the California State University System (CSUS).

The 2002-2003 state budget had allocated $15,443,000 for the GSE Program. The proposed mid-year budget reductions would change the GSE Program allocation by reducing it by $8,000,000. It is CDE's understanding that GSE Program's allocation will continue to be discussed as part of the 2003-2004 state budget process.

It is anticipated that with this reduced allocation, the only tests that will be maintained and administered in spring 2003 are the linked tests. Therefore, the tests that will be discontinued are: first-year algebra, geometry, biology, chemistry, physics, second-year coordinated science, economics, government / civics, U.S. history, and second-year Spanish language. A letter has been sent to the field to make it aware of this anticipated change in the GSE Program along with further information on ordering and pre-identification.

Also, in anticipation of the reduction, our current GSE contractor, NCS Pearson, has been asked to prepare the costs incurred for the program to this point. It has also been told to limit their ongoing work to the linked tests through administration, scoring, and reporting.

As requested, CDE has prepared, for SBE's information, a brief historical account of the development process for GSE's augmented tests.

- In 2001, the California Education Roundtable proposed increasing the potential use of the

GSE (a voluntary exam to identify high achieving students) by determining the feasibility of using the results of the GSE Program tests to inform possible placement, admission, and/ or credit decisions by the University of California (UC), California State University (CSU), Community College (CC), and private college systems.

- The Intersegmental Coordinating Committee of the Education Roundtable (ICC), with its Working Group on Assessment, established two subcommittees, the Intersegmental Test Alignment (ITA) groups in English-language arts and mathematics in August 2001 to determine if a GSE score could be useful for Higher Education. These groups consisted of representatives from the UC, CSU, CC, private college systems, GSE Development Teams, contractors responsible for administering the tests, California Standards Test (CST) Content Review Panels, and the CDE.
- Senate Bill 233 (Alpert) was signed into law in October 2001, with the goal of improving the California assessment system by restructuring the GSE to increase the potential use of the examination by Higher Education. Additionally, to reduce testing time and in subjects for which a CST and a GSE exist, a GSE score would consist of some portion of a CST and additional GSE items.
- The SBE approved a plan in November 2001 establishing a timetable for implementing SB 233.
- The ITA groups in English-language arts and mathematics met regularly during 2001-2002 to determine the feasibility of producing a GSE score that would be useful for Higher Education. The two groups came to a consensus on a GSE score that would consist of the results of the CST along with a GSE component. This structure reduced the testing time for the Grade 11 English-language arts GSEs by 90 minutes and reduced the testing time for the High School Mathematics GSE by one class period.
- This structure required revisions to the CST blueprints for Grade 11 English-language arts and High School Mathematics. SBE adopted these revised blueprints in October 2002.
- GSE subcommittees in English-language arts and mathematics met and produced GSE blueprints to coordinate with the appropriate CST blueprints.
- Using these blueprints, small subcommittees of the ITA groups in English-language arts and mathematics, working with the new GSE contractor, American College Testing (ACT) produced test forms for the English-language arts and mathematics GSE components to be administered in Spring 2003 (the High School Mathematics GSE test administration was changed from Winter to Spring to facilitate this new structure).
- Although GSE scores are traditionally reported in October of the year of test administration, representatives from the CSU system, working with the CDE and ACT, established a pilot program of 50 high schools for the 2003 GSE administration for English-language arts and mathematics. The goal is for ACT to report a GSE score to participating high schools by August 15th, 2003.
- Representatives from CSU, UC, CDE, and testing contractors for the CST and the GSE will meet in February 2003 to determine the logistics of producing the GSE score (consisting of a merge of CST and GSE Component scores). This meeting will establish procedures for scale score reporting, matching criteria, rangefinding, score combination/calculation with CST scores, and scoring procedures.

GSE ENGLISH-LANGUAGE ARTS BLUEPRINT

CALIFORNIA CONTENT STANDARDS: READING	GSE Blueprint
2.0 READING COMPREHENSION (FOCUS ON INFORMATIONAL MATERIALS): Students read and understand grade-level-appropriate material. They analyze the organizational patterns, arguments, and positions advanced. The selections in *Recommended Readings in Literature, Grades Nine Through Twelve* illustrate the quality and complexity of the materials to be read by students. In addition, by grade twelve, students read two million words annually on their own, including a wide variety of classic and contemporary literature, magazines, newspapers, and online information.	**0-10 reading multiple choice questions*** **0-2 short reading responses****
3.0 LITERARY RESPONSE AND ANALYSIS: Students read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. They conduct in-depth analyses of recurrent themes. The selections in *Recommended Readings in Literature, Grades Nine Through Twelve* illustrate the quality and complexity of the materials to be read by students.	**0-10 reading multiple-choice questions* 0-2 short reading responses****

CALIFORNIA CONTENT STANDARDS: WRITING	GSE Blueprint
1.0 WRITING STRATEGIES: Students write coherent and focused texts that convey a well-defined perspective and tightly reasoned argument. The writing demonstrates students' awareness of the audience and purpose and progression through the stages of the writing process.	**10 writing multiple-choice questions**
2.0 WRITING APPLICATIONS (Genres and Their Characteristics) Students combine the rhetorical strategies of narration, exposition, persuasion, and description to produce texts of at least 1,500 words each. Student writing demonstrates a command of standard American English and the research, organizational, and drafting strategies outlined in Writing Standard 1.0.	**1 extended essay**

*Whether the reading-multiple-choice (mc) questions address the Reading Comprehension or Literary Response strand in a particular year will depend on whether the extended reading passage is fiction or nonfiction.
** The two short student responses to a reading passage may address several of the standards within either the Reading Comprehension or Literary Response and Analysis strands depending on the extended passage used for the reading portion.

GRADE 11 ENGLISH LANGUAGE ARTS CALIFORNIA STANDARDS TEST BLUEPRINT

CALIFORNIA CONTENT STANDARDS: READING		CST Blueprint
1.0	**WORD ANALYSIS, FLUENCY, AND SYSTEMATIC VOCABULARY DEVELOPMENT: Students apply their knowledge of word origins to determine the meaning of new words encountered in reading materials and use those words accurately.**	**8**
1.1	**Vocabulary and Concept Development:** trace the etymology of significant terms used in political science and history	√
1.2	**Vocabulary and Concept Development:** apply knowledge of Greek, Latin, and Anglo-Saxon roots and affixes to draw inferences concerning the meaning of scientific and mathematical terminology	√
1.3	**Vocabulary and Concept Development:** discern the meaning of analogies encountered, analyzing specific comparisons as well as relationships and inferences	√
2.0	**READING COMPREHENSION (FOCUS ON INFORMATIONAL MATERIALS): Students read and understand grade-level-appropriate material. They analyze the organizational patterns, arguments, and positions advanced. The selections in *Recommended Readings in Literature, Grades Nine Through Twelve* illustrate the quality and complexity of the materials to be read by students. In addition, by grade twelve, students read two million words annually on their own, including a wide variety of classic and contemporary literature, magazines, newspapers, and online information.**	**19**
2.1	**Structural Features of Informational Materials:** analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices	√
2.2	**Comprehension and Analysis of Grade-Level-Appropriate Text:** analyze the way in which clarity of meaning is affected by the patterns of organization, hierarchical structures, repetition of the main ideas, syntax, and word choice in the text	√
2.3	**Comprehension and Analysis of Grade-Level-Appropriate Text:** verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents	√
2.4	**Comprehension and Analysis of Grade-Level-Appropriate Text:** make warranted and reasonable assertions about the author's arguments by using elements of the text to defend and clarify interpretations	√
2.5	**Comprehension and Analysis of Grade-Level-Appropriate Text:** analyze an author's implicit and explicit philosophical assumptions and beliefs about a subject	√
2.6	**Expository Critique:** critique the power, validity, and truthfulness of arguments set forth in public documents; their appeal to both friendly and hostile audiences; and the extent to which the arguments anticipate and address reader concerns and counterclaims (e.g., appeal to reason, to authority, to pathos and emotion)	√

GRADE 11 ENGLISH LANGUAGE ARTS CALIFORNIA STANDARDS TEST BLUEPRINT

CALIFORNIA CONTENT STANDARDS: READING		CST Blueprint
3.0	**LITERARY RESPONSE AND ANALYSIS: Students read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. They conduct in-depth analyses of recurrent themes. The selections in *Recommended Readings in Literature, Grades Nine Through Twelve* illustrate the quality and complexity of the materials to be read by students.**	**17**
3.1	**Structural Features of Literature:** analyze characteristics of subgenres (e.g., satire, parody, allegory, pastoral) that are used in poetry, prose, plays, novels, short stories, essays, and other basic genres	√
3.2	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze the way in which the theme or meaning of a selection represents a view or comment on life, using textual evidence to support the claim	√
3.3	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze the ways in which irony, tone, mood, the author's style, and the "sound" of language achieve specific rhetorical or aesthetic purposes or both	√
3.4	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze ways in which poets use imagery, personification, figures of speech, and sounds to evoke reader's emotions	√
3.5	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze recognized works of American literature representing a variety of genres and traditions:	√
	1) trace the development of American literature from the colonial period forward	√
	2) contrast the major periods, themes, styles, and trends and describe how works by members of different cultures relate to one another in each period	√
	3) evaluate the philosophical, political, religious, ethical, and social influences of the historical period that shaped the characters, plots, and settings	√
3.6	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze the way in which authors through the centuries have used archetypes drawn from myth and tradition in literature, film, political speeches, and religious writings (e.g., how the archetypes of banishment from an ideal world may be used to interpret Shakespeare's tragedy *Macbeth*)	√
3.7	**Narrative Analysis of Grade-Level-Appropriate Text:** analyze recognized works of world literature from a variety of authors:	
	1) contrast the major literary forms, techniques, and characteristics of the major literary periods (e.g., Homeric Greece, medieval, romantic, neoclassic, modern)	**0**
	2) relate literary works and authors to major themes and issues of their eras	**0**
	3) evaluate the philosophical, political, religious, ethical, and social influences of the historical period that shaped the characters, plots, and settings	**0**
3.8	**Literary Criticism:** analyze the clarity and consistency of political assumptions in a selection of literary works or essays on a topic (e.g., suffrage, women's role in organized labor) (Political approach)	√
3.9	**Literary Criticism:** analyze the philosophical arguments presented in literary works to determine whether the authors' positions have contributed to the quality of each work and the credibility of the characters (Philosophical approach)	√

GRADE 11 ENGLISH LANGUAGE ARTS CALIFORNIA STANDARDS TEST BLUEPRINT

CALIFORNIA CONTENT STANDARDS: WRITING	CST Blueprint
1.0 WRITTEN AND ORAL ENGLISH LANGUAGE CONVENTIONS: Students write and speak with a command of standard English conventions.	**9**
1.1 demonstrate control of grammar, diction, and paragraph and sentence structure, and an understanding of English	√
1.2 produce legible work that shows accurate spelling and correct punctuation and capitalization	√
1.3 reflect appropriate manuscript requirements in writing	**0**
1.0 WRITING STRATEGIES: Students write coherent and focused texts that convey a well-defined perspective and tightly reasoned argument. The writing demonstrates students' awareness of the audience and purpose and progression through the stages of the writing process.	**22**
1.1 **Organization and Focus:** demonstrate an understanding of the elements of discourse (e.g., purpose, speaker, audience, form) when completing narrative, expository, persuasive, or descriptive writing assignments	√
1.2 **Organization and Focus:** use point of view, characterization, style (e.g., use of irony), and related elements for specific rhetorical and aesthetic purposes	√
1.3 **Organization and Focus:** structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples	√
1.4 **Organization and Focus:** enhance meaning by employing rhetorical devices, including the extended use of parallelism, repetition, and analogy; the incorporation of visual aids (e.g., graphs, tables, pictures); and the issuance of a call for action	√
1.5 **Organization and Focus:** use language in natural, fresh, and vivid ways to establish a specific tone	√
1.6 **Research and Technology:** develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources)	**NA**
1.7 **Research and Technology:** use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies)	√
1.8 **Research and Technology:** integrate databases, graphics, and spreadsheets into word-processed documents	**NA**
1.9 **Evaluation and Revision:** revise text to highlight the individual voice, improve sentence variety and style, and enhance subtlety of meaning and tone in ways that are consistent with the purpose, audience, and genre	√
TOTALS	**75**

GRADE 11 ENGLISH LANGUAGE ARTS CALIFORNIA STANDARDS TEST BLUEPRINT

CALIFORNIA CONTENT STANDARDS: WRITING	CST Blueprint
2.0 Writing Applications (Genres and Their Characteristics) Students combine the rhetorical strategies of narration, exposition, persuasion, and description to produce texts of at least 1,500 words each. Student writing demonstrates a command of standard American English and the research, organizational, and drafting strategies outlined in Writing Standard 1.0.	
2.1 Write fictional, autobiographical, or biographical narratives: a. Narrate a sequence of events and communicate their significance to the audience. b. Locate scenes and incidents in specific places. c. Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the characters; use interior monologue to depict the characters' feelings. d. Pace the presentation of actions to accommodate temporal, spatial, and dramatic mood changes. e. Make effective use of descriptions of appearance, images, shifting perspectives, and sensory details.	
2.2 Write responses to literature: a. Demonstrate a comprehensive understanding of the significant ideas in works or passages. b. Analyze the use of imagery, language, universal themes, and unique aspects of the text. c. Support important ideas and viewpoints through accurate and detailed references to the text and to other works. d. Demonstrate an understanding of the author's use of stylistic devices and an appreciation of the effects created. e. Identify and assess the impact of perceived ambiguities, nuances, and complexities within the text.	
2.3 Write reflective compositions: a. Explore the significance of personal experiences, events, conditions, or concerns by using rhetorical strategies (e.g., narration, description, exposition, persuasion). b. Draw comparisons between specific incidents and broader themes that illustrate the writer's important beliefs or generalizations about life. c. Maintain a balance in describing individual incidents and relate those incidents to more general and abstract ideas.	

PROPOSED GRADE 11 ENGLISH LANGUAGE ARTS CALIFORNIA STANDARDS TEST BLUEPRINT

CALIFORNIA CONTENT STANDARDS: WRITING	CST Blueprint
2.4 Write historical investigation reports: a. Use exposition, narration, description, argumentation, exposition, or some combination of rhetorical strategies to support the main proposition. b. Analyze several historical records of a single event, examining critical relationships between elements of the research topic. c. Explain the perceived reason or reasons for the similarities and differences in historical records with information derived from primary and secondary sources to support or enhance the presentation. d. Include information from all relevant perspectives and take into consideration the validity and reliability of sources. e. Include a formal bibliography.	
2.5 Write job applications and resumés: a. Provide clear and purposeful information and address the intended audience appropriately. b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension. c. Modify the tone to fit the purpose and audience. d. Follow the conventional style for that type of document (e.g., resumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.	
2.6 Deliver multimedia presentations: a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD- ROMs, the Internet, electronic media-generated images). b. Select an appropriate medium for each element of the presentation.	

HIGH SCHOOL MATHEMATICS (SUMMATIVE) CALIFORNIA STANDARDS TEST
(Formerly Grade 11 Test)

CALIFORNIA CONTENT STANDARDS	Previous Public Blueprint	2003 Revised Blueprint	%
Algebra I	**18**	**18**	**28%**
4.0* Students simplify expressions prior to solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$.		✓	
5.0* Students solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	✓	✓	
6.0* Students graph a linear equation and compute the x- and y- intercepts (e.g., graph $2x + 6y = 4$). They are also able to sketch the region defined by linear inequality (e.g., they sketch the region defined by $2x + 6y < 4$).		✓	
7.0* Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations using the point-slope formula.		✓	
8.0 Students understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point.		✓	
10.0* Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.	✓	✓	
11.0 Students apply basic factoring techniques to second-and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.		✓	
12.0* Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.	✓	✓	
14.0* Students solve a quadratic equation by factoring or completing the square.	✓	✓	
15.0* Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.	✓	✓	
20.0* Students use the quadratic formula to find the roots of a second-degree polynomial and to solve quadratic equations.		✓	
23.0* Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.	✓	✓	
Geometry	**19**	**19**	**29%**
3.0* Students construct and judge the validity of a logical argument and give counterexamples to disprove a statement.		✓	
4.0* Students prove basic theorems involving congruence and similarity.	✓	✓	
5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.		✓	
7.0* Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.		✓	
8.0* Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.	✓	✓	
9.0 Students compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.		✓	
10.0* Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.		✓	
11.0 Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.		✓	
15.0 Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	✓	✓	
17.0* Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.	✓		
18.0* Students know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example, $\tan(x) = \sin(x)/\cos(x)$, $(\sin(x))^2 + (\cos(x))^2 = 1$.	✓	✓	
19.0* Students use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.		✓	
21.0* Students prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.	✓	✓	

✓ Standard assessed on the California Standards Test

* Key standards (*Mathematics Framework for California Public Schools*) comprise a minimum of 70% of the test

HIGH SCHOOL MATHEMATICS (SUMMATIVE) CALIFORNIA STANDARDS TEST
(Formerly Grade 11 Test)

CALIFORNIA CONTENT STANDARDS	Previous Public Blueprint	2003 Revised Blueprint	%
Algebra II	**23**	**23**	**35%**
1.0* Students solve equations and inequalities involving absolute value.		✓	
2.0* Students solve systems of linear equations and inequalities (in two or three variables) by substitution, with graphs, or with matrices.	✓	✓	
3.0* Students are adept at operations on polynomials, including long division.		✓	
4.0* Students factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes.		✓	
6.0* Students add, subtract, multiply, and divide complex numbers.	✓	✓	
7.0* Students add, subtract, multiply, divide, reduce, and evaluate rational expressions with monomial and polynomial denominators and simplify complicated rational expressions, including those with negative exponents in the denominator.	✓	✓	
8.0* Students solve and graph quadratic equations by factoring, completing the square, or using the quadratic formula. Students apply these techniques in solving word problems. They also solve quadratic equations in the complex number system.		✓	
10.0* Students graph quadratic functions and determine the maxima, minima, and zeros of the function.	✓	✓	
11.1* Students understand the inverse relationship between exponents and logarithms, and use this relationship to solve problems involving logarithms and exponents.		✓	
12.0* Students know the laws of fractional exponents, understand exponential functions, and use these functions in problems involving exponential growth and decay.	✓	✓	
14.0 Students understand and use the properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values.	✓	✓	
15.0* Students determine whether a specific algebraic statement involving rational expressions, radical expressions, or logarithmic or exponential functions is sometimes true, always true, or never true.	✓	✓	
18.0* Students use fundamental counting principles to compute combinations and permutations.	✓	✓	
19.0* Students use combinations and permutations to compute probabilities.		✓	
22.0 Students find the general term and the sums of arithmetic series and of both finite and infinite geometric series.		✓	
23.0* Students derive the summation formulas for arithmetic series and for both finite and infinite geometric series.	✓		
24.0 Students solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions.		✓	
Probability and Statistics	**5**	**5**	**8%**
1.0 Students know the definition of the notion of *independent events* and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces.	✓	✓	
2.0 Students know the definition of *conditional probability* and use it to solve for probabilities in finite sample spaces.	✓	✓	
7.0 Students compute the variance and the standard deviation of a distribution of data.	✓	✓	
HIGH SCHOOL MATHEMATICS TOTAL	**65**	**65**	**100%**

✓ Standard assessed on the California Standards Test

* Key standards (*Mathematics Framework for California Public Schools*) comprise a minimum of 70% of the test

HIGH SCHOOL MATHEMATICS GSE COMPONENT

Mathematics Disciplines Assessed	Number of multiple choice test items per discipline	Percent of multiple choice test items per discipline	* Number of constructed response test items
Algebra I	**2**	**10%**	**2**
Geometry	**4**	**20%**	
Algebra II	**13**	**65%**	
Probability & Statistics	**1**	**5%**	
Multiple Choice Test Items	**20**	**100 %**	
Total Number of Items on the GSE Component	22		

*The High School Mathematics GSE Component includes two constructed response items that may span one or more of the disciplines assessed on the GSE.